

8607ED 2592E060

09/037-657
10/27

FIGURE 1

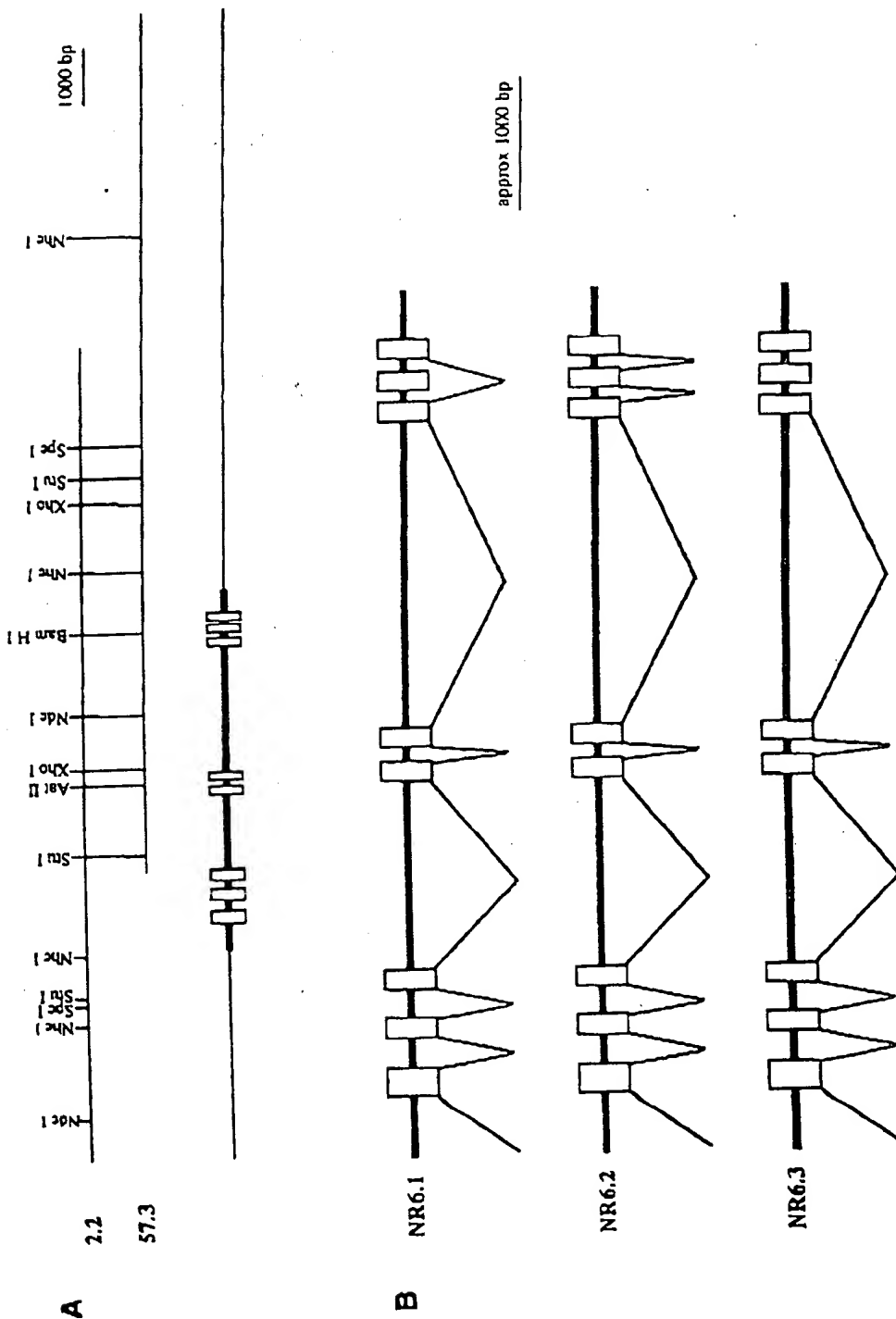


FIGURE 2

3/23
4/23
5/23
6/23
7/23
8/23
9/23
10/23
11/23

FIGURE 2 (continued)

91	cccagaactcttggacgctgaggcaggaggattccca
938	agtttcaagacagtgtgtttctaggtaaatgagaccctgtcaagaa
983	aagaaaagaaataaagagacaaagaaaatgtttataggctgtgaga
9128	cagcttggtaggttaaggggcacttgcctccaatcaagatgacctc
9173	agcccatccctagggaatccatggtagaaggagaaagcaaaactcg
9218	cagctgtgacctccatacatgtgtccaatgtgcacacacacag
9263	ggagacataataataggtatgtatttgcttagatttgagta
9308	ggcatttatgactgatgttttaaaatlttatttgattttatgaa
9353	aatataacctgtttgtatttgggttgggttgggttgggttgggtt
9398	atttgagacagggttctctgtgtgtagtccctgggtgtccttggaaac
9443	tcactctgtagaccagggtggccttgaaactcagaaatccgcctgc
9488	ttgtgttcccaagtgttagattaaagggtgtgcactgcccattca
9533	gcaaaattgcataactttaaccccgatatttgggaggcagaggcag
9578	actaatgtgtgaattccagggttagccaaaggatcacagagtgaagacc
9623	ctattcttaccctcccccccccaaaaccccaaaatgtatttgtgc
9668	ttgtgtatgtacatgtgtgttgcagcacgtaaaatgtccaaggaca
9713	acttgtagaagtctctccgttcacagtctaaagtccctgaattcaa
9758	actaaaggctcctcaggcttagccacagtcttcttcttgactgagc
9803	catttcaactggccctggattgactgatgaattaatltttagagata
9848	aggctctctgtagctctagctaggctcaaaactatgaactcccaag
9893	gtcatcttggagctgtgggtactcttcttgggaaagggtgggtgg
9938	aatgatactcaggcagcacttctctgggaaagggtgggtgggtgg
9983	ccctgatlttgttgcctcagcttcaatgagtgttgggtctcgtt
91028	gtttcttttctttatctgtgaaatgggtgaacacctgttcaagac
91073	ttcctgactcttgaacatccaggcagggtgagggacttgaagtg



FIGURE 2 (continued)

g1658 P P E K P F N I S C W S R N M
CCCCTGAGAAAGCCCTTTAAACATCAGCTGCTGGTCCCGGAACATGA

g1703 K D L T C R W T P G A H G E T
AGGATCTCACGTCGCCGCTGGACACCGGGTGCACACGGGGAGACAT

g1748 F L H T N Y S L K Y K L R
TCTTACATACCAACTACTCCCTCAAGTACAAGCTGAGgttggtac
g1793 ccagccaaagccttgctgtgtgacttctggaataacttaccttctc
g1838 tgatcaaatatgttcctgtttatgaactcaaaaggactctctcgca

g1883 W Y G Q D N T C E E Y H
cctccacagGTGTACGGTCAGGATAACACATGTGAGGAGTACCA

g1928 T V G P H S C H I P K D L A L
CACTGTGGGCCCTCACTCATGCCATATCCCCAAGGACCTGGCCCT

g1973 F T P Y E I W V E A T N R L G
CTTCACTCCCTATGAGATCTGGTGGTGAAGCCACCAATCGCCTAGG

g2018 S A R S D V L T L D V L D V
CTCAGCAAGATCTGATGTCTCACACTGGATGTCTGGACGTGGg

g2063 tgagcccccagtgccaccctgttctgccctagacccttatagg
g2108 cgctccccccatccccccagacttttggttcttcttagaggctc
g2153 tttagccacagccacgggtggttgccagcacagtgggtgttcataact
g2198 taatgcaaaagactttcccccaagacagtcagaatttttccccctcc

FIGURE 2 (continued)

g2243	ccaccccaacacacacatacacacacacactctgcagagaacacct
g2288	ggcctgaccacccctccctctctacagcccagggtctcagaaggga
g2333	gtcctaggggactgagaggaggcggccagggtctgaaggcgcccca
g2378	ggaagccgaggccttgagctggggggggggggggagggttgaggc
g2423	acgaactggatgatccctgagcacaaactgggccaatttaaccttcaagt
g2468	ggtgttcccagcccacaaagcagcctggggccaatttaaccttcaagt
g2513	gcctcaactgaagactcaggggagagatcagcctgtactctctcca
g2558	tggccccccagagggttcctgggtggccttaacctcagctctccaca
g2603	tccagagggtttgtgtcttccctggcatttaacctcagctctccaca
g2648	ctgtggctggcacagctgccccgtggagggtcttggtaattgtaca
g2693	aggcatcagagggtggacatgggatggggatcacatagggatggagc
g2738	caaatagcacctcaagggtgggtgatatacaataaaggcttgtcac
g2783	cctgacgctcagaaagcctactcatgatcacaaattgttgaca
g2828	tcactctgggacatgtagtggagacccttagctcaaaacacagacag
g2873	tagctttaagagtcagcttgtgacttaatactggaaactcagggcc
g2918	taatagggtgctgggtgatgctcgccctcactccctgtttagtgaga
g2963	tctctgcgtaatctccaccccgctgggtgggtgggtgctctgtccc
g3008	cttgaggggcaggaaatgtgtgtcttccatcagagataggacccgtg
g3053	gtagcagcaactgctggctgggtgttcttgggaatatataatgacag
g3098	taatctatcaggcctgggtgagtagctaacagggtggggggcgtg
g3143	gtctggaaaaacgcagatagggtcataggagccactgcagccctaga
g3188	ttacaccactgggtgttctgtcactaggccattctcaccaagcag
g3233	tcctcagaactgggagcactgttgccagcatttaattgccagcatt
g3278	taattgccagcattaggggaggcagagggcagaaggatctctctgag
g3323	ttcaaggccatcctgaatttacataaagagctccaggccagccag
g3368	ggtgcgcagtaaaaccttgctctcaaaaaacaaagcattcttagtg

g3413	accaggcttgctccacccccagTGACCACGGACCCCCCACCACCGAC V T T D P P D
g3458	V H V S R V G G L E D Q L S V GTGCACGTGAGCCGCGTTGGGGCCCTGGAGGACCAGCTGAGTGtg
g3503	R W V S P P A L K D F L F Q A CGCTGGGTCTCACCAACAGCTCTCAAGGATTTCCTCTTCCAAGCC
g3548	K Y Q I R Y R V E D S V D W K <u>AAGTACCAGATCCGCTACCGCTGGAGGACAGCGTGGAAG</u> gtgcccgtccccgacccgccccctgacccccccccgcgat
g3638	ctgactcctccctcaccgtgcagGTGGTGATGACGTCAGCAACC V V D D V S N
g3683	Q T S C R L A G L K P G T V Y <u>AGACCTCCTGCCGTCTCGCGGGCCTGAAGCCCGCACCGTTTACT</u>
g3728	F V Q V R C N P F G I Y G S K <u>TCGTCCAAGTGCGTTGTAAACCCATTCCGGGATCTATGGGTCGAAA</u>
g3773	K A G I W S E W S H P T A A S <u>AGGCGGGAATCTGGAGCGAGTGGAGCCACCCACCGCTGCCTCCA</u>
g3818	T P R S <u>CCCCTCGAAGTGtgtagcacctctccagggtggtggtggcccatgg</u>
g3863	aatcccccaatccatcctgttccttccccccccaccctttttttgag

FIGURE 2 (continued)

g3908	acagcgtcttcaggtagcgcatgctggccttaaatcagtatgta
g3953	gtcaaggatgacctcgagctcctggctcttctgctccacttaga
g3998	gacaaaggccagtggccatcacacccttgggagactagccatgg
g4043	agtctatttagcctgtcatttgggtgacagatggagtacaacagtg
g4088	tgacctcttgtaagagaactgaagacaggctgttttaaccccaa
g4133	tatcctaggctctctagaggttaactttataataaatagagacta
g4178	ttacagccagttatcacatgggtccacagaaacctttgtcacaca
g4223	acctatagaccacagtgcctgtgcctaccacataagggtctctac
g4268	tgctggcccaacctccaaccttaaaaggtaacctaggcagcct
g4313	taatatctgcaatcctcctacctcagcctcttgatgctcagaaa
g4358	ccaggcattaacccaagtctctctctctgggtcccttctctaaag
g4403	gtgggagggcctaagatgacttcccttggctcctgaagactctccg
g4448	agcccatggatctgcactctctaataatgaaatatatgcataaaa
g4493	tgtctggcctcagtttccccacctgtcagggttaggcagcacagt
g4538	cggccaagacacttcattatttgcaggcagataaagaagaagct
g4583	cccatccccaccgcttccctccggtccctaaagacagaatacttc
g4628	tacactgaaactgaactctcgacagacgcataatgctcactttaatg
g4673	atgatgaaataatggggaacctgaggctccgagagattcctggag
g4718	gaagaggggtcaaaaccagctccagggaagcttccagcccccatcc
g4763	gggcctctccagggtcttgggcttggcgggagtgaaacacagctggg
g4808	aggggctggagcctgggagcttgggccccttgctcgtgccagcac
g4853	ctgcgatcttgcacgggagccacagcggcgtgcgtccgcccga
g4898	gagactgaagaagccgggggtagggttggaggagggttaagcaggg
g4943	gctgtgggggcccgaagcttgtgccagggcctgtcagcagtcctcc
g4988	agttttatttatggcgtgaggccgatgtccttatccgctggcctg
g5033	ctgggggggatggctgcggctgggggatgggaccccaagggtggcttc

FIGURE 2 (continued)

g5078 ccactcagtcctccagcccaactccatgtcacacccgtgcattctc
g5123 tgaggcttatcttggaacccgcccttgctctgtgctgtctct
g5168 ctattctgtcattcactttccagagcccttttttatgctttt
g5213 aatataactacgttttaaaaatgctttgtataatgtgtgtgcc
g5258 ttcgtgagcgtgcgtgccacaacacacacgtgaaggtagagaaac
g5303 tttgtgagtaggctccttccaccatgtgggactagggctggcga
g5348 caagagcaatctactgagtcattcgtccagccctcaccctcact
g5393 tcccatcctgcttgatagtcattaggttaacgaaggtaaatcgtc
g5438 ggctttaatttcgtagctatcctgcctcagcctaccaagtgtgt
g5483 gctaccacgtttgtggagggtctctcctccagtgcttgggggt
g5528 gacacagtcaccaagatctctgctttctaggtctttgtcttagttt
g5573 gccccttgctttgtccgtgtccctagagtcctcggccccacttacc
g5618 cattgactggtctttcctttaccgaataactcggttttacctccca
g5663 ctgatttgactccctcctttgcttgcttgctccatcgccgtggcattg
g5708 ccattcctctgggtgactctgggtccacacctgacacctttccca
g5753 acttccccagccgaagctggtctggtatgggagggccgcgtccc
g5798 gcgcgcgcctcctgctggccgcgcgcgcacacactgcccgtccattc

E R P G P G G G V C E P R
tcttttagAGCGCCCGCGCGCGCGGGGGGTGTGCGAGCGCGGG

G G E P S S G P V R R E L K Q
GGCGCGGAGCCCGAGCTCGGGCCCCGGTGGCGCGGAGCTCAAGCAG
F L G W L K K H A Y C S N L S
TTCCCTCGGCTGGCTCAAGAAGCACGCATACGTCTCGAACCTTAGT

g5078
g5123
g5168
g5213
g5258
g5303
g5348
g5393
g5438
g5483
g5528
g5573
g5618
g5663
g5708
g5753
g5798

g5843

g5888

g5933

FIGURE 2 (continued)

95978 F R L Y D Q W R A W M Q K S H
TTCCGCCCTGTACGACCAGTGGCGTCTGGATGCAGAAATCACAC

96023 K T R N Q V G K L G E A C V G
AAGACCCGAAACCAGGTAGGAAAGTTGGGGGAGGCTTGCGTGGGG

96068 G K G A E E R D P G E Q P P
GGTAAAGGAGCAGAGGAAGAGAGACCCGGGTGAGCAGCCTCCA

96113 Q H R T L L S K H R T R G S C
D E G I L
CAACACCGCACTCTTCTTCCAAAGCACAGGACGAGGGGATCCTGC

96158 P R A D G V R R E V R G S G *
P S G R R G A A R
CCTCGGCAGACGGGGTGGCGGAGAGGTAAGGGGTCTGGGTGA
96203 GTGGGGCCTACAGCAGTCTAGATGAGGCCCTTCCCTCCTCGG
96248 TGTTGCTCAAAGGATCTCTTAGTGCTCATTTCAACCCACTGCAAA
96293 GAGCCCCAGGTTTACTGCATCATCAAGTTGCTGAAGGGTCCAGG

96338 V L P A K L
G P A G *
CTTAATGTGGCCTCTTTTCTGCCCTCAGGTCTGCGGCTAAACT

96383 *
CTAAGGATAGGCCATCCTCCTGCTGGTCAAGACCTGGAGGCTCAC

FIGURE 2 (continued)

96428	CTGAATTGGAGCCCCCTCTGTACCATCTGGGCAACAAAGAAACCTA
96473	CCAGAGGCTGGGCACAAATGAGCTCCACAAACCACAGCTTTGGTCC
96518	ACATGATGGTCACACTTGGATATACCCAGTGTGGGTAGGGTTGG
96563	GGTATTGCAGGGCCCTCCCAAGAGTCTCTTTAAATAAAATAAGGAG
96608	TTGTTTCAGGTcccgatggccagtggtttggggcctatgtgctgg
96653	ggtgggggga

FIGURE 3

13/23
14/23
15/23
16/23
17/23
18/23
19/23
20/23
21/23

FIGURE 3

CCGCCCGCTG CAGTGATTAC TCACCGCGTG GCGCACCCCA CCCGCGGGCC GCTGAGTGA	60
TTTTTCCGTG GGGGGATGTG AAGAAGTTTA GGGAGAACTC TTCTGCACCG ATGGGAACTA	120
CGAATGCAGG GTTCGGTCCC GTTCCCCAAA GGACACACCT CTCCCCATAA GCCCACTCAT	180
AAGGGCTCCC TGCACGCGCT CCGGGACATC CCCATATCCA ATACCCGCAG ATATGATAGT	240
TGAGAAGGGA CCAGAGGCCG GAGACTCCCT CCCTGCCTTC TGCTTTCCC CCCCCCTGC	300
ACGAAACGAG ACTACAGCGA TGGGAGAGGT GGCATGAAGG CTTAGGGTGG GGATCGGTAG	360
GACCCATGCA CCCAGAGAAA GGGACTGGTG GCAACTTTCA AACTCTCTGG GGAAGGAAGA	420
AGGGCTGAAA GAGGATGAAC GGGCTCAGGT ACTGCTCAAT GTGTGTGTGG CGGACCAAAG	480
TGGGTATGGG GGGCCCGTAA GAGGGGCGGG GAAGGTGGAT AGGAAGGATC CCGGTAGACT	540
GGAGGGGATC CTGGAAGAGC ACCAGGGCTG CGAGCTAGGA ACCCATTCGG AGTTAAGGGT	600
ACAGGATCCC AGATGAGGGG GTGGGAAGCC TGGGACGGCC GGGACCAGAG AGGGAGGTCC	660
CACGGGCTGG TGGGAAAGA GTGGGGGGCT TCGCGCAGGA GGATGGGACG TTCAGGAGTG	720
GTAACGGGC GGAGGCCGGC CGGGCGGGGC GCGCGGTGCC CGCGGGCGGT GGAAGGCCG	780
GTGCGGGGCC CACGATCAAC CCCCCCCAG GGGCGGGCC GGGCGGGGG CGGGGCCGG	840
CGGGGCGAGC GCGCATTAG CGCCTGTGCA ATTTCGGCTG CTCAGACTTG CTCCGGCCTT	900
CGCTGTCCGC GCCAGTGAC GCGCGTGAGG ACCCGAGCCC CAATCTGCAC CCCGCAGACT	960
CGCCCCGCC CCATACCGGC GTTGCACTCA CCGCCCGTTG CGCGCCACCC CCATGCCCCG	1020
GGGTCGCCCC GGGCCCGTCG CCCAATCCGC GCGCGGGCCG CCGCGGCCG TGTCTCTGCT	1080
GTGGTCGCCT CTGTTGCTCT GTGTCCTCGG GGTGCTCGG GCGGATCGG GAGCCCGTGA	1140
GTACCGTGCG CCCTGCTCCC CACCTCCCCA GGAAGCCGG GATCCGGCGC CCCGGGGGT	1200
ACTCGCGGGG GATGGAAGAA GGGGCGCGAG CGCCACCTGG ACGTCCCGG AACAAAGGAA	1260
CGCGGCCCTC GGGGCGCCCT CACCTGTGGG GCTCATGGCA CCACCACCA GCCTCCCAAG	1320

FIGURE 3 (CONTINUED)

AGTACCCCGT TATACATCAG AGGCCTCTTA TCTGTATCCC CTTTGCAGAG CTGTCTGGCC	1380
AGGCTCAGTT TGAAGGACAT CGCAGTGTCC TGGGACCCCC CTCCTTCAGG GTGCTGGGAC	1440
GCTTCGGGGC GCACGCCTGT GTCTTGATA TCAGAGCGGA AGGGAAGCCT CCCTGGCCGG	1500
GGGCGCACGC TTGGGTGCGT TGGGTTGGGT GCTGGCGCAA AGTGGGGTCC CCTCCCCAT	1560
GAAGTGATGA TCCCCGGGGG GAGGGTGGGG CGTTATCGTG AGCCCTCCTG TCCGCCTGGC	1620
ATGCGGCCCCG GCGTCCCTCG GGACTTGCTT CTCCGTGGGG TCGGCGCCGC CCCCTCCCCC	1680
CTATAGCAGA CTCCATGCTT TGGTATCCTC GAAGTCCTCT CCACTGGTGG GGCTCACAAC	1740
CGGTCTCATT CAGGCTGCGC TGGGTTGAGA GCCTCTAGCG ACTGAAATTT CGGTGAGGAG	1800
CGAGAGCAAG CGTGTCCGGG CACCGCGAGC CCAGACTTCA TTGTCTAAGG GGCACCCAGT	1860
GGGGGTCAGC TGCCGAGAGA ATCCCACTGT CCCAGGAGGA ACTCCTGGCC TTGAGCCCCC	1920
ATCACCCAAC GCACACATCC CCGCCAGGAT GCGGTCTCCA CATCCAGACC CTCTCTGGGA	1980
CACACCCAAA GACACACAAA AGAGCCCCAC TGGCTTATGT CCCGTCACCC TGCCCTCCGA	2040
CGCGCGCTGC AGCCCAGATG CGTATTCGCA CACCATCGCG GCGCTCGCAT TCCATCCTCT	2100
ACACACACAC ACACACACAC ACACACACAC ACACACACAC ACACACAGAC ACGCACACAC	2160
ACACGCACGC ACACACACGC ACGCCCGCAC TCGTGGTCCC ACATTTATTT CACAGGGGAG	2220
GCAACACCGG GGTACGCATA TGGTTGAGTG CACTGGAGAT CTTTCCCCAC CACTCTCAGG	2280
ACCCCATCCG GAGACACAGG CCACACCGCA GGGGCACCAC GCTGCGCTGC TGCTCTGGGC	2340
TAGTAGTCTT GTGCAGTTTG TCCGCGGTGT CTGTGGACGC CCTCCCGCTC TTGTCAGGGG	2400
ACAGGAACCT ACACTCCTGC TTGCCCAAGG CGGCTGGGCA GGTGATGTGG TGACACCCGG	2460
GACCTTTCGG GGGAGTTGGT GTTGCTGCCA AGCCTGGGTA GTTTTGAAT GCCACCAATA	2520
GCGCTAAGCT TTGTTTCCGG GCGGGCTGCA GAGCAACAGG CGAAGGTGGC GGAGTGGGGG	2580
TGGCGCGTGT GTTTTTCCTT TTAAGGGGGA GAGAAATTAA ATAAGAGOTT CTCACACCTC	2640
TGCAATCTGT TTGTACTTAC CGTGTGTCTT AACACCTGAC CAGCCAGCCG GTGGGTCGTA	2700
AAAGTGATG CAGGTACCAG CGGGACAGGA GATGGGGGCC CCTGGGGTAT GGCTGGGATG	2760

FIGURE 3 (CONTINUED)

GAGGCCACCT TCCCGTTGGC CTTTCAGGGA ATCTCACACT TTTCCCTTTT AAAACACATG	2820
GTGTTCTTTT TAATAACGGC AGCAACTCCG CATTGGGAAA GGGGAAATA AGCTTGATA	2880
GGCCCCGGCT TTGTGGAAAG GAGGGGAAGA GGAAGAAAA AAGGAGGGGT GTCTCCTCCA	2940
GGCTTAGGGG GCTGTCAGCT GCTGCTCTGT CTAGCTTGGC ATGTGTGTGC CCCAGTCCCC	3000
AGTGGCTTTG GCCCATTGTT TGTGGAAGCC AAGAGGGAGA CTGGAGTCCT CTATCTCTGG	3060
TACTCCAGAG TCAGGCTTCT CAGTCCGAGC CCAGAGAACG TCTTCCCTGT TTTATGGAGG	3120
GAATCAGGGA AGGGGGTGCC AGGTGGACTA CGTTCTGCTG AGGACTGTAC CAGTCGCTCG	3180
AAGGAGAAAG CTTGGGCTTG CCCCCCTCCC CCTCAAGCC ACGAAGGGCA GCTGCTAGGC	3240
TAGTGTGGTA AAAGGGCATT ACTCCCCAGC CAGGACCCCC CAGAGAGTCC CCTTCCTGGC	3300
CAGACAAATG CTGGGGAGGG ACAGAGGGGT GTGATCATTG CCCAGGAGTG CAGACAGTGG	3360
GGTCCCCGGT CGGGCAGTGC CTCCCACCCT GCTGAGGGGG GCGCCAGGC AGGAAGCGGT	3420
GGGTGGGCCG GGGTAGAGAC GCTGGCACGT CCCAGTTCAT GCCGAAGGAA TTCTGAATTA	3480
GCGGGCGGCT GGCTGCCTGG GACCTCCGGG GCGGCCCCCT GGCCCCCGCC GCTCCGTCTG	3540
GCCTGCTCCT CCGCTCCTT CGCACGGACG CTGAGACCTC CGCTGAGCCC TGGGACAAGC	3600
CCCAAATGCA ACTGCGATTG CAGGCTTCGC AAGACCCGCC TCCTCCCAAG GCCAAATTTG	3660
CCTGGGAGAA GTCATTACAG GCCCAGACTA GAACCATGTT GGTGCCACCT CATCCATCTG	3720
GGGCATGAAG GACCGTCCAG GGCTGCAGTT TAGCTTCTTA ATAGGAACCT GGGGGTGGGT	3780
GCAGCCTCTG TTCTCCGAGC CTCTTTGGAA ATCGGTTTTG TTTTGTTTT TGTTTTTTCC	3840
AATACTCTTT TCCTCTCATC CCATCCCGGG ACTGTTTTCC TCCCTAAGGG TTGAGAGCCC	3900
TGCAGTCTTC CCTAACCTTT TCTTTGCTTC TACCCAGGG CCTTTGCACA TGGAGTCCCA	3960
CCTCTCCCCT TGCCCAACTG GGGCTCCAGC CTTACTGCAT TTGGCTCTTG GTAACGTGCC	4020
CAGGGCCTCT CTGACACACA GGGTTGTAGC CCCAGCTCCC TCTCTTCTCC TCCCCCTTT	4080
CTCTTTTGCT TCTGAGACTT AATTTTTTTC TTTTCTTTT TGGCTTTTG AGACAGGGTT	4140
TCTCTGTACA GCCCTGGCTG CCCTGGCACT CATTCTGTAG ACCAGGCTAG CCTCAAATC	4200

FIGURE 3 (CONTINUED)

ACAAACCTAC CTGCCTCTGC CTTTCCAGTG CTGGCACTAA AGATGTGGGC CACCACAAC	4260
AGTAGTTAAG TGTTTTGCTG TGTCTTTATT CCTATAGTGA CCTCAGTTCC TGGCATATTG	4320
TAGGCGATGG ATGGATGAAT GGATGGATGG ATGGATGGAT GGATGGTTGG ATGGAGCAAG	4380
CTTGAATCGT CCTGAGTGAA AAAAGAGACC TCAGAGAACT GAATGGAGTT AGGTTCCTCAG	4440
GGCAGCCTGG CCTGCTGGTC TCATGGGAGC TCCCTGTGAA ACTTCCCCCA CACCTCCCAC	4500
CACCTGCCA TCCTGTGTGG CTGACAAGAA AGGCCAATGG CCAGATGGGG ACACAGACTC	4560
AGGGAAGCTT GGAATATGTT CCCCTCCTCA TATCCTAGGC CTTGTTGTCC CCCTGAGGGC	4620
CCAGCCTATG AGTAGGGCAG CTGTGGGCTG CCCTAAGGTT GGGTAGGCAA GAAGGGGGTG	4680
GTCCCTCAGG GTGGGTCACA GGATTGAGGT CATTTCCAAA GTGGCCATCA CAGTGGCCCT	4740
AGGAAATGAT TGTGGAGAGT CAGAACTCCT GTTGGGAGTT GTAGAGGGCC TTGCATGTGG	4800
GCTTCTGTGG CTGTCCCTTC TCTGTGGTC CTTTGCACAG TCCCCTCGTG TGTGCTGGGA	4860
TGTGAGGAGG GCACGGGGAA AATGAAGGCT CAGCCCCTCA GCTTGCCCTT CACGGTTCAC	4920
CCAACAGGGC TCACCTCTCC TCTGGACAGG CTCTCACTGT ATGCACAGAT TGGCCTCACA	4980
TTTGATTCCC TTCCTTTGGT CTCCTGGGAT GACAAACATT TACCAGGGTA GGATTTTACA	5040
TTTGTAGATAT GTCCATTCTC CAGAAACACA CTTGTGAGGT TAGGGTATCA GTGAAAGGAC	5100
ACCACCAGGA CAGACAAAGA ATTGGAGAGG AAGGAAATTG GTAAGCCAGG CCATGCTTGA	5160
TGGCTTATGT GTAATCCCAG AACTCTGGAC GCTGAGGCAG GAGGATTCCA AGTTTCAAGA	5220
CAGTGTGTTC TAGGTAATGA GACCTGTCA AGAAAAGAAA AGAAATAAAG AGACAAGAAA	5280
ATGTTTATAG GCTGTGAGAC AGCTTGGTGG GTAAGGGGCA CTTGCCTCCA ATCAAGATGA	5340
CCTCAGCCCC ATCCCTAGGA ATCCATGGTA GAAGGAGAAA GCAAATCCA GCTGCTGACC	5400
TCCATACATG TGCTCCAATG TGCACACACA CAGGGAGACA TAATCAATTA ATAGGATGTA	5460
TTTGCTTAGA TTTGAGTAGG CATTTATGAC TGATGTTTTA AAATTTTAT TTGATTTAT	5520
GAAAATATAC CTGTTTGTAT TTGGTTTGGT TTGGTTTGAG TTTGTTTAT TTGAGACAGG	5580
GCTTCTCTGT GTAGTCTGG CTGTCTTGG AACTCACTCT GTAGACCAGG CTGGCCTTGA	5640

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FIGURE 3 (CONTINUED)

ACTCAGAAAT CCGCCTGCTT GTGCTTCCCA AGTGCTTAGA TTAAAGGTGT GCACTGCCAT	5700
TCAGCAAAAT TGCATACTTT AACCCCAGTA TTTGGGAGGC AGAGGCAGAC TAATGTGTGA	5760
ATTCCAGGCT AGCCAAGGAT ACAGAGTGAG ACCCTATTCT TACCCTCCCC CCCCAAAACC	5820
CCAAAATGTA TTTTGTGCTT GTGTATGTAC ATGTGTGTTG CAGCACGTAA ATGTCCAAGG	5880
ACAACTTGTA GAAGTTCTCT CCGTTCACAG TCTAAGTCCT GAATTCAAAC TAAGGTCTCT	5940
AGGCTTAGCC ACAGTCTTCT TTATGTACTG AGCCATTTC A CTGGCCCTGG ATTGACTGAT	6000
GAATTAATTT TTGAGATAAG GTCTCTTGTA GCTCTAGCTA GGCTCAAAC ATGAACTCCC	6060
AAGGTCATCT TGAGCTGCTG GTACTCTTGC TTCCACCCCA AGTGGTGGAA TGATACTCAG	6120
GCAGCACTTC TCTGGGGAAG GGGCTGGCCT TGGCCTTGAT TTTGTTGCCT CAGCTTCAAT	6180
GAGTGCTTGG GTCTCGTTGT TTCTTTTCTT TATCTGTGAA ATGGGTGAAC ACCTGTTCAA	6240
GACTTCCTGA CTCTTGAAAC ATCCAGGCAG GGTGAGGGAC TTGAAGTGGG CTCATCCCAT	6300
GCCTAACAAA GTGTCGTCTT TGACCCCAAG CACAGCTGTA ATCAGCCCCC AGGACCCAC	6360
CCTTCTCATC GGCTCCTCCC TGCAAGCTAC CTGCTCTATA CATGGAGACA CACCTGGGGC	6420
CACCGCTGAG GGGCTCTACT GGACCTTCAA TGGTCGCCGC CTGCCCTCTG AGCTGTCCCG	6480
CCTCCTTAAC ACCTCCACCC TGGCCCTGGC CCTGGCTAAC CTTAATGGGT CCAGGCAGCA	6540
GTCAGGAGAC AATCTGGTGT GTCACGCCCG AGACGGCAGC ATTCTGGCTG GCTCCTGCCT	6600
CTATGTTGGC TGTAAGTGGG CCCCCAGACA CTCAGAGATA GATGGGGGTT GGCAATGACA	6660
GATTTAGAGC CTGGGTCTTC TGTCTGGGG CAGAGCCATG GGCTCTCACT TGCATGCAGG	6720
CATGGTCATA CCCAGCACAG GCATTGCAAC TCTAGGGACA GCTGTGGCTG CACTGTCCCC	6780
TGTGTACCCC ACAGCTTTAG AAAAGCTGTC ATGTTTTCCT TGTAAGTGGG CCTGAGAAGC	6840
CCTTTAACAT CAGCTGCTGG TCCCGGAACA TGAAGGATCT CACGTGCCGC TGGACACCGG	6900
GTGCACACGG GGAGACATTC TTACATACCA ACTACTCCCT CAAGTACAAG CTGAGGTTGG	6960
TACCCAGCCA AGCCTTGCTG TGTGACTTCT GGCAATACTT ACCTTCTCTG ATCAAATATG	7020
TTCTGTGTTA TGAAC TCAAA AGGGACTCTC GCACCTCCAC AGGTGGTACG GTCAGGATAA	7080

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FIGURE 3 (CONTINUED)

CACATGTGAG GAGTACCACA CTGTGGGCCC TCACTCATGC CATATCCCCA AGGACCTGGC	7140
CCTCTTCACT CCCTATGAGA TCTGGGTGGA AGCCACCAAT CGCCTAGGCT CAGCAAGATC	7200
TGATGTCCCTC AACTGGATG TCCTGGACGT GGGTGAGCCC CCAGTGTCCTA CCTGTGTTCT	7260
GCCCTAGACC TTATAGGGCG CCTCCCCCCC ATCCCCCAG ACTTTTGGT TCTTCTAGAG	7320
GTCTTAGCCA CAGCCACGGT GGTTCAGGA CAGTGGTTGT TCATAACTTA ATGCAAAGAC	7380
TTCCCCCAA GACAGTCAAG ATTTTCCCCT CCCCACCCC AACACACACA TACACACACA	7440
CTCTGCAGAG AACACCTGGC CTGACCACCC TCCCTCTCTA CAGCCCAGGT GTTCAGAAAG	7500
GAGTCCTAGG GGA CTGAGAG GAGGCGCCCA GGTCTGAAG CGCCCCAGGA AGCCGAGGCC	7560
TTGAGCTGGG GGGGGGGCG AGGGTTGGAG GCACGAACTG GATGATCCCT GAGCACAACT	7620
GGGCCTAATC TAATTAGGGT GTTCCCAGCC CAAAGCAGCC TGGGCCATTT AACCCTTCAA	7680
GTGCCTCACT GAAGACTCAG GGGAGAGATC AGCTTGACT CTCTCCATGG TCCCCAGGA	7740
GGGTCCTGG GTGCCCTGG CTCATTCCCA CATCCAGAGG TTTGTGTCT TCCTGGCATC	7800
TAACCCTCAG TTGTGCTCTG TGGCTGGCAC AGCTGCCCG TGGAGGCTCT TGGTAATGTA	7860
CAAGGCATCA GAGGTGACA TGGGATGGG ATACATAGG ATGGAGCCAA ATAGCACCTC	7920
AAGGTGGGGT GATATACAAT AAAGCTTGT ACCCTGACGC TCAGAAAGCC TACTCATGAT	7980
GATCACAATT GTTGACATCA CTCTGGACA TGTAGTGAGA CCTAGCTCA AAACACAGAC	8040
AGTAGCTTTA AGAGTCAGCT TGTGACTTAA TACTGGAAT CAGGGCCTAA TAGGTGCTGG	8100
GTGATGCTCG CCTCACTCCC TGTTTAGTGA GATCTCTGCG CTAATCTCCA CCCCAGCTGG	8160
GTGGGCTGCT CTGTCCCTT GAGGGCAGGA ATGTGTGTCT TCCATCAGAG ATAGGACCCG	8220
TGGTAGCAGC AACTGCTGCT GGCTGTTCT GGAATATTAA ATGACAGTAA TCTATCAGGC	8280
CTGGGTGAGT AGCTAACAGG GGTGGGGCG TGGTCTOGAA AACGCAGATA GGGTCATAGG	8340
AGCCACTGCA GCCTAGATTA CACCACTGGG TGTTCGTCA CTAGGCCAT CTCACCAAGC	8400
AGTCCTCAGA ACTGGGAGCA CTGTTGCCAG CATTTAATGC CAGCATTTAA TGCCAGCAT	8460
AGGGGAGGCA GAGGCAGAAG GATCTCTCTG AGTTCAAGGC CATCCTGAAT TTACATAAAG	8520

FIGURE 3 (CONTINUED)

AGCTCCAGGC CAGCCAGGGT GCGCAGTAAA ACCTTGCTCTC AAAAAACAAA GCATCTTTAG	8580
TGACCAGGCT TGCTCCACCC CCAGTGACCA CGGACCCCCC ACCCGACGTG CACGTGAGCC	8640
GCGTTGGGGG CCTGGAGGAC CAGCTGAGTG TGCCTGGGT CTCACCACCA GCTCTCAAGG	8700
ATTTCTCTT CCAAGCCAAG TACCAGATCC GCTACCGCGT GGAGGACAGC GTGGACTGGA	8760
AGGTGCCCCGT CCCGCCCCCG ACCCGCCCCCT GACCCCGCCC CCCGCATCTG ACTCCTCCCT	8820
CACCGTGCAG GTGGTGGATG ACCTCAGCAA CCAGACCTCC TGCCGTCTCG CGGGCCTGAA	8880
GCCCCGCACC GTTACTTCG TCCAAGTGCG TTGTAACCCA TTCGGGATCT ATGGGTCGAA	8940
AAAGGCGGGA ATCTGGAGCG AGTGGAGCCA CCCACCGCT GCCTCCACCC CTCGAAGTGG	9000
TGAGCACCTC TCCAGGGCTG GCTGGCCCAT GGAATCCCCA ATCCATCCTG TTCCTTCCCC	9060
CCCACCCTTT TTTGAGACA GCGTCTTCAG GTAGCGCATG CTGGCCTTAA ATTCAGTATG	9120
TAGTCAAGGA TGACCTCGAG CTCCTGGTCT TTTGTCTCC ACTTAGAGAC AATGGCCAGT	9180
GGCCATCACC ACCTTTGGGA GACTAGCCAT GGAGTCTATT TAGCCTGTCA TTTGGTGACA	9240
GATGGAGTAC AACAGTGTGA CCTCTTGTA GAGAACTGAA GACAGGCTGT TTTTAACCCC	9300
AATATCCTAG GCTCTCTAGA GGTAACTTT ATATAAATA GAGACTATTA CAGCCAGTTA	9360
TCACATGGTC CCACAGAACC TTTGTGACA CAACCTATAG ACCACAGTGC CTGTGCCTAC	9420
CACATAAGGG TCTCTACTGC TGGCCCCACC CTCCAACCCT TAAAAGGTAA CCTAGGCAGC	9480
CTTAATATTT GCAATCCTCC TACCTCAGCC TCTTGAATGC TCAGAAACCA GGCATTAACC	9540
CAAGTTTCTC TTCTCTGGGT CCCTTTCTTA AGGTGGGAGG GCCTAAAGAT GACTTCCTTT	9600
GTCCTGAAGA CTCTCCGAGC CCATGGATCT GCACTCTCTA ATATGAAATA TATTGCATAA	9660
AATGTCTGGC CTCAGTTTCC CCACCTGTCA GGTTTAGGCA GCACAGTCGG TCCAAGACAC	9720
TTCATTATTT GCAGGCAGTA TAAGAAGAAG CTCCCATCCC CCACCCGCTT CCTCCGGTCC	9780
CTAAGACAGA ATACTTCTAC ACTGAACTG AACTCTCGCA GACGCATATG CTCACCTTAA	9840
TGATGATGAA ATAATGGGGA AACTGAGGCT CCGAGAGATT CCTGGAGGAA GAGGGTCAAA	9900
ACCAGCTCCA GGAAGCTCTC CAGCCCCCAT CCGGGCCTCT CCAGGTTCTG GGCTTGGCGG	9960

FIGURE 3 (CONTINUED)

GAGTGAACAC AGCTGGGAGG GGCTGGAGCC TGGGAGCTTT GGCCCTTGCT CGTGCCCAGC	10020
ACCTGCGATT CTTGCACGGG AGCCAGCAGG CGGCTGCGTC CGCCCGAGAG ACTGAAGAAG	10080
CCGGGGGTAG GGTGGAGGG AGGTAAGCAG GGGCTGTGGG GGCCGAAGCT TGTGCCAGGG	10140
CCTGTCAGCG AGTCCCCAGT TTTATTTATG GCGTGAGGCC GATGTCCTTA TCCGCTGGCC	10200
TGCTGGGGGA TGGCTGCGGC TGGGGATTGG ACCCAAGGGC TGGCTTCCCA CTCAGTCCTC	10260
CAGCCCACTC CATGTCACAC CCGTGCAATC TCTGAGGCTT ATCTTGGGAA CCCGCCCTTG	10320
TTCTGTGCTG TCTGTCTCTA TTTCTGTCAT TCACTTTCCC AGAGCCTTTT TTTTATGCTT	10380
TTAATATAAC TACGTTTTAA AAATTGCTTT TGTATAATGT GTGTGCCTTC GTGAGCGTGC	10440
GTGCCACAAC ACACACGTGA AGGTTAGAGA ACTTTGTTGA GTAGGCTCCT TCCACCATGT	10500
GGGACTAGGG CTGGCGACAA GAGCAATTAC TGAGTCATCT CGCCAGCCCC TCACCCCTCA	10560
CTTCCCATCC TGTGTGGATA GTCATAGGTA ATCGAAGGTA AATCGCTGGC TTTAATTTG	10620
TAGCTATCCT GCCTCAGCCT ACCAAGTGCT GTGCTACCAC GTTGTGGGA GGGGCTCTCC	10680
TCCCAGTGTC TGGGGGTACA CAGTCCCAAG ATCTCTGCTT TCTAGGTCTT TGTCTAGTT	10740
TGCCCTTGC TTTGTCCGTG TCCCTAGAGT CTCCGGCCCC ACTTAGTCTC CATTGATTTC	10800
CTTTCTGACC GAATACTCGG TTTTACCTCC CACTGATTG ACTCCCTCCT TTGCTGTCT	10860
CCATCGCCGT GGCATTGCCA TTCCTCTGGG TGACTCTGGG TCCACACCTG ACACCTTTCC	10920
CAACTTTCCC CAGCCGAAGC TGGTCTGCTA TGGGAGGCCG CCGTCCCGCG CGCGCCTCCT	10980
GCTGGCCGCG CCCCAACACT GCCGCTCCAT TCTCTTTAGA GCGCCCGGGC CCGGGCGGGC	11040
GGGTGTGCGA GCCGCGGGGC GCGAGCCCA GCTCGGGCCC GGTGCGGCGC GAGCTCAAGC	11100
AGTTCCTCGG CTGGCTCAAG AAGCACGCAT ACTGCTCGAA CCTAGTTTC CGCCTGTACG	11160
ACCACTGGCG TGCTTGGATG CAGAAGTCAC ACAAGACCCG AAACCAGGTA GGAAAGTTGG	11220
GGGAGGCTTG CGTGGGGGGT AAAGGAGCAG AGGAAGAGAG AGACCCGGGT GAGCAGCCTC	11280
CACAACACCG CACTCTTCTT TCCAAGCACA GGACGAGGGG ATCCTGCCCT CGGGCAGACG	11340
GGGTGCGGCG AGAGGTAAGG GGTCTGGGT GAGTGGGGCC TACAGCAGTC TAGATGAGGC	11400

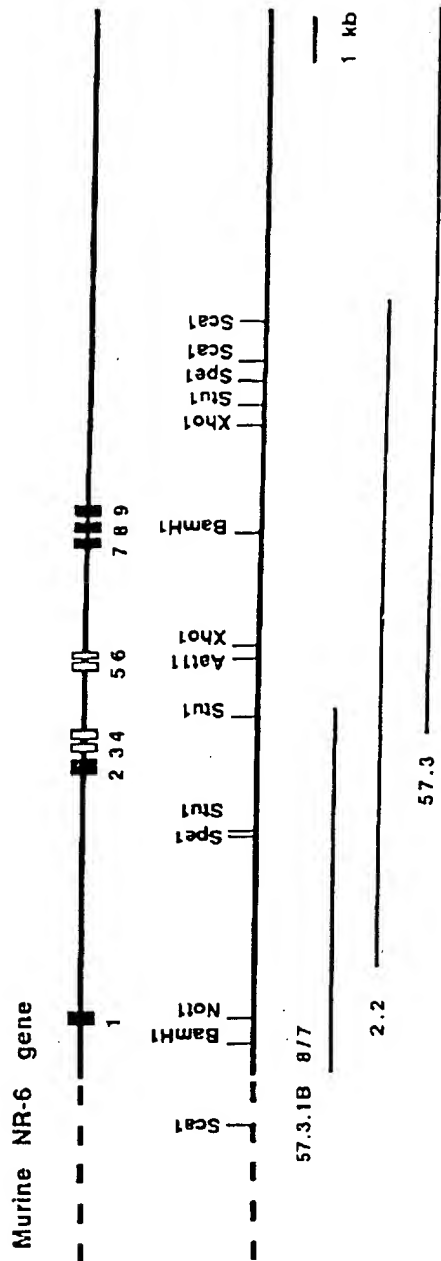
FIGURE 3 (CONTINUED)

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AAGAGCCCCA GOTTCTACTG CATCATCAAG TTGCTGAAGG GTCCAGGCTT AATGTGGCCT	11520
CTTTTCTGCC CTCAGGTCCT GCCGGCTAAA CTCTAAGGAT AGGCCATCCT CCTGCTGGGT	11580
CAGACCTGGA GGCTCACCTG AATTGGAGCC CCTCTGTACC ATCTGGGCAA CAAAGAAACC	11640
TACCAGAGGC TGGGCACAAT GAGCTCCAC AACCACAGCT TTGGTCCACA TGATGGTCAC	11700
ACTTGATAT ACCCCAGTGT GGGTAGGGTT GGGGTATTGC AGGGCCTCCC AAGACTCTCT	11760
TTAAATAAAT AAAGGAGTTG TTCAGGTCCC GATGGCCAGT GTGTTTGGGG CCTATGTGCT	11820
GGGCTGGGGG GA	11832

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FIGURE 4

Murine NR-6 genomic structure



Murine NR-6 protein

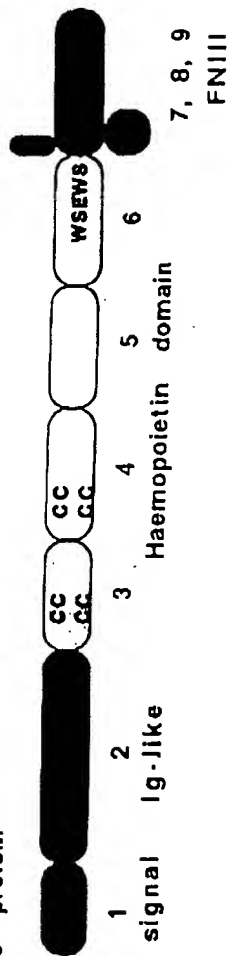
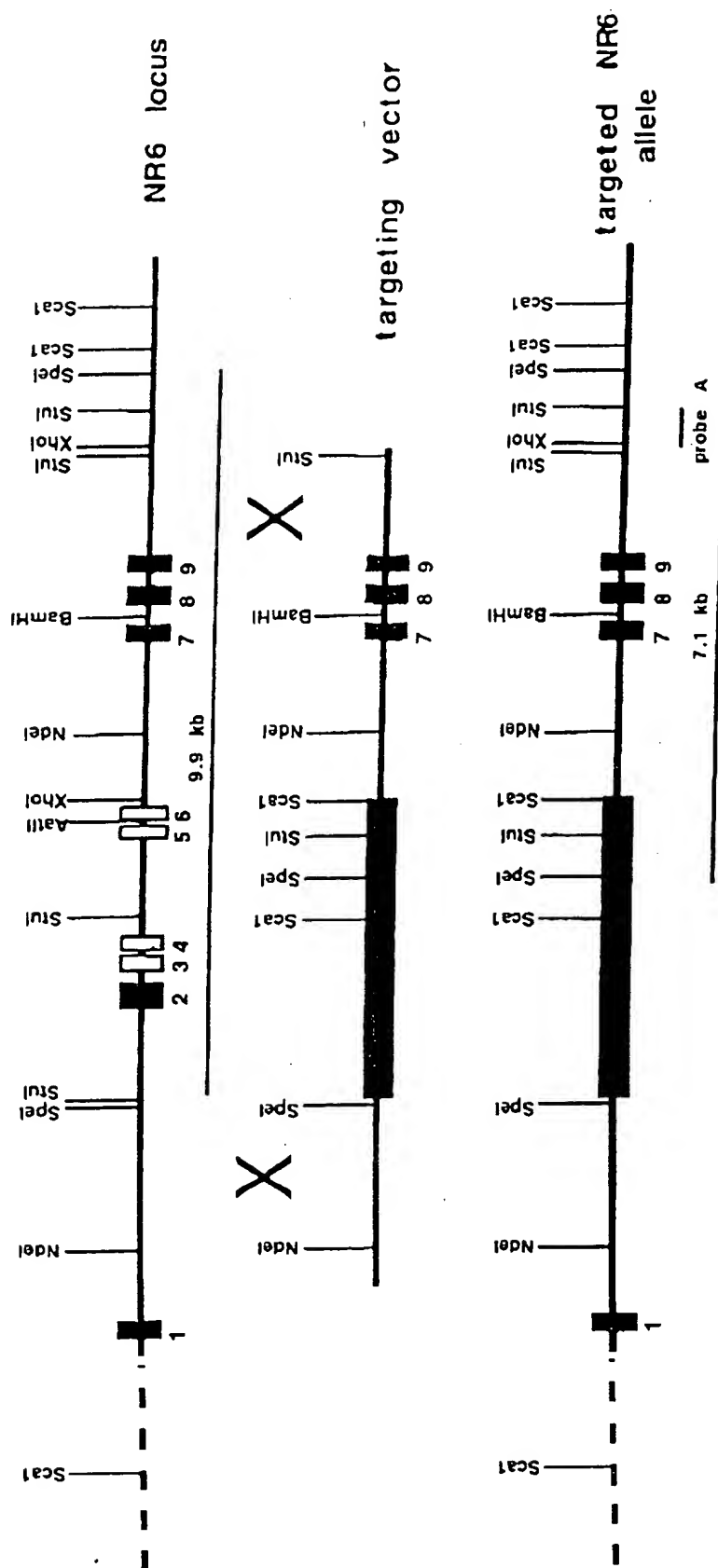


FIGURE 5

Targeting the NR6 locus by homologous recombination



1 MetProAlaGlyArgArgGlyProAlaAlaGlnSerAlaArgArgProPro - ProLeuLeuProLeu - - - LeuLeuLeuCys Human NR6
1 MetProAlaGlyArgProGlyProValAlaGlnSerAlaArgArgProProArgProLeuSerSerLeuTrpSerProLeuLeuLeuCys Mouse NR6

27 ValLeuGlyAlaProArgAlaGlySerGlyAlaHisThrAlaValIleSerProGlnAspProThrLeuLeuIleGlySerSerLeuLeu Human NR6
31 ValLeuGlyValProArgGlyGlySerGlyAlaHisThrAlaValIleSerProGlnAspProThrLeuLeuIleGlySerSerLeuGln Mouse NR6

57 AlaThrCysSerValHisGlyAspProProGlyAlaThrAlaGluGlyLeuTyrTrpThrLeuAsnGlyArgArgLeuProProGluLeu Human NR6
61 AlaThrCysSerIleHisGlyAspThrProGlyAlaThrAlaGluGlyLeuTyrTrpThrLeuAsnGlyArgArgLeuProSerGluLeu Mouse NR6

87 SerArgValLeuAsnAlaSerThrLeuAlaLeuAlaLeuAlaAsnLeuAsnGlySerArgGlnArgSerGlyAspAsnLeuValCysHis Human NR6
91 SerArgLeuLeuAsnThrSerThrLeuAlaLeuAlaLeuAlaAsnLeuAsnGlySerArgGlnGlnSerGlyAspAsnLeuValCysHis Mouse NR6

117 AlaArgAspGlySerIleLeuAlaGlySerCysLeuTyrValGlyLeuProProGluLysProValAsnIleSerCysTrpSerLysAsn Human NR6
121 AlaArgAspGlySerIleLeuAlaGlySerCysLeuTyrValGlyLeuProProGluLysProPheAsnIleSerCysTrpSerArgAsn Mouse NR6

147 MetLysAspLeuThrCysArgTrpThrProGlyAlaHisGlyGluThrPheLeuHisThrAsnTyrSerLeuLysTyrLysLeuArgTrp Human NR6
151 MetLysAspLeuThrCysArgTrpThrProGlyAlaHisGlyGluThrPheLeuHisThrAsnTyrSerLeuLysTyrLysLeuArgTrp Mouse NR6

177 TyrGlyGlnAspAsnThrCysGluGluTyrHisThrValGlyProHisSerCysHisIleProLysAspLeuAlaLeuPheThrProTyr Human NR6
181 TyrGlyGlnAspAsnThrCysGluGluTyrHisThrValGlyProHisSerCysHisIleProLysAspLeuAlaLeuPheThrProTyr Mouse NR6

207 GluIleTrpValGluAlaThrAsnArgLeuGlySerAlaArgSerAspValLeuThrLeuAspIleLeuAspValValThrThrAspPro Human NR6
211 GluIleTrpValGluAlaThrAsnArgLeuGlySerAlaArgSerAspValLeuThrLeuAspValLeuAspValValThrThrAspPro Mouse NR6

237 ProProAspValHisValSerArgValGlyGlyLeuGluAspGlnLeuSerValArgTrpValSerProProAlaLeuLysAspPheLeu Human NR6
241 ProProAspValHisValSerArgValGlyGlyLeuGluAspGlnLeuSerValArgTrpValSerProProAlaLeuLysAspPheLeu Mouse NR6

267 PheGlnAlaLysTyrGlnIleArgTyrArgValGluAspSerValAspTrpLysValValAspAspValSerAsnGlnThrSerCysArg Human NR6
271 PheGlnAlaLysTyrGlnIleArgTyrArgValGluAspSerValAspTrpLysValValAspAspValSerAsnGlnThrSerCysArg Mouse NR6

297 LeuAlaGlyLeuLysProGlyThrValTyrPheValGlnValArgCysAsnProPheGlyIleTyrGlySerLysLysAlaGlyIleTrp Human NR6
301 LeuAlaGlyLeuLysProGlyThrValTyrPheValGlnValArgCysAsnProPheGlyIleTyrGlySerLysLysAlaGlyIleTrp Mouse NR6

327 SerGluTrpSerHisProThrAlaAlaSerThrProArgSerGluArgProGlyProGlyGlyGlyAlaCysGluProArgGlyGlyGlu Human NR6
331 SerGluTrpSerHisProThrAlaAlaSerThrProArgAsnGluArgProGlyProGlyGlyGlyValCysGlnProArgGlyGlyGlu Mouse NR6

357 ProSerSerGlyProValArgArgGluLeuLysGlnPheLeuGlyTrpLeuLysLysHisAlaTyrCysSerAsnLeuSerPheArgLeu Human NR6
361 ProSerSerGlyProValArgArgGluLeuLysGlnPheLeuGlyTrpLeuLysLysHisAlaTyrCysSerAsnLeuSerPheArgLeu Mouse NR6

387 TyrAspGlnTrpArgAlaTrpMetGlnLysSerHisLysThrArgAsnGlnAspGluGlyIleLeuProSerGlyArgArgGlyThrAla Human NR6
391 TyrAspGlnTrpArgAlaTrpMetGlnLysSerHisLysThrArgAsnGlnAspGluGlyIleLeuProSerGlyArgArgGlyAlaAla Mouse NR6

417 ArgGlyProAlaArgTer Human NR6
421 ArgGlyProAla - Gly Mouse NR6

Figure 7: Comparison of human and mouse NR6 protein sequences

Figure 8

Transient Expression of C Terminal FLAG tagged Human NR6 in 293T cells

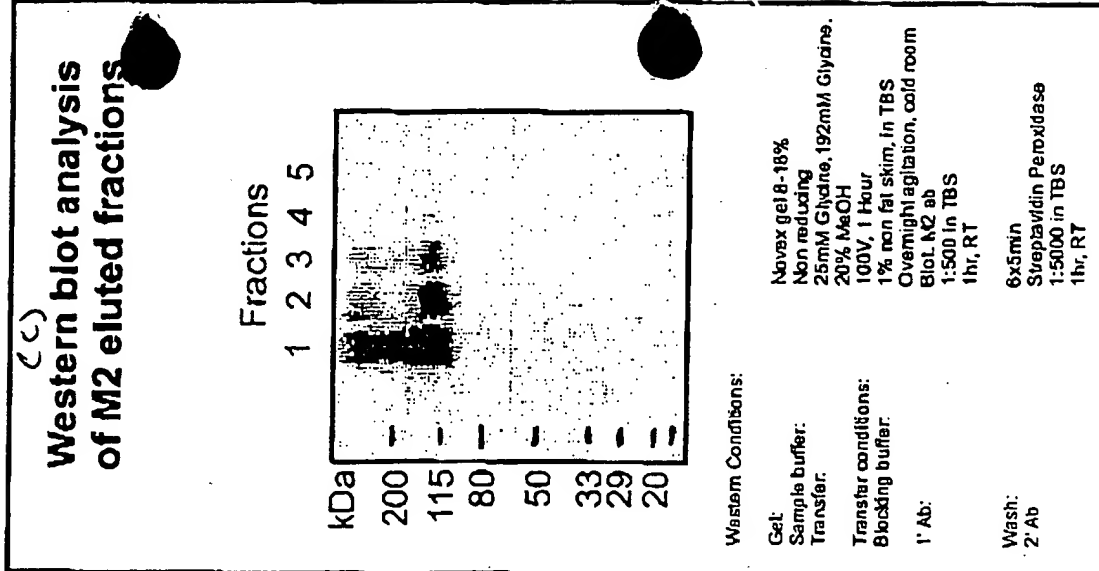
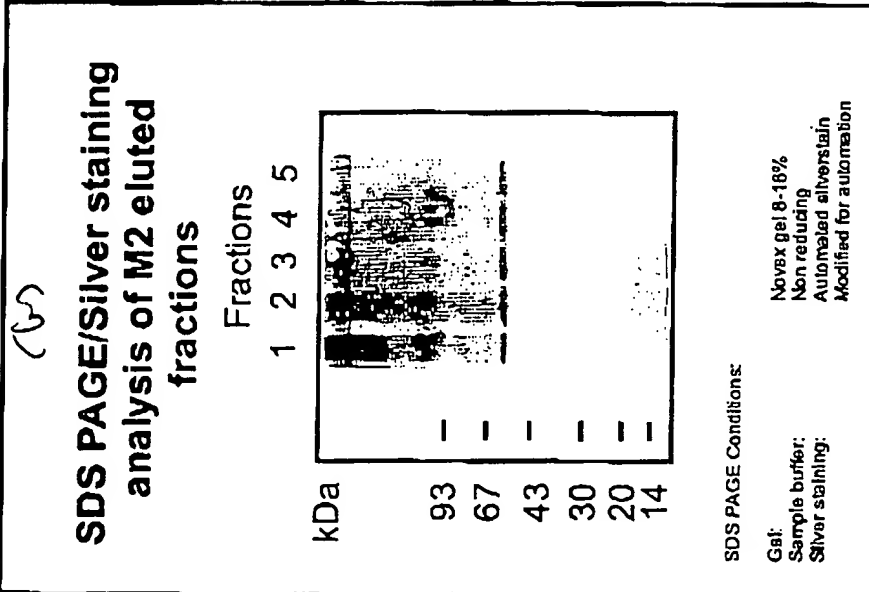
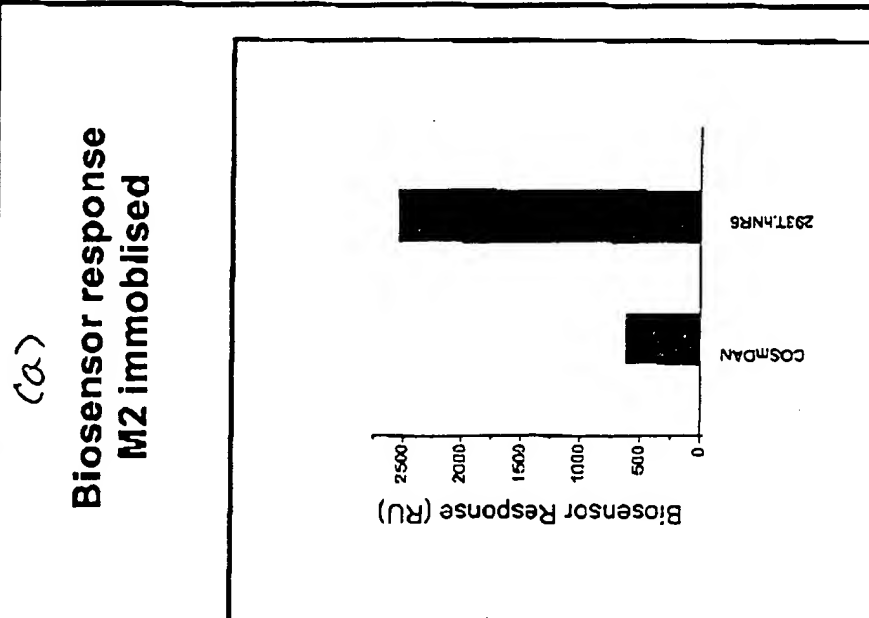
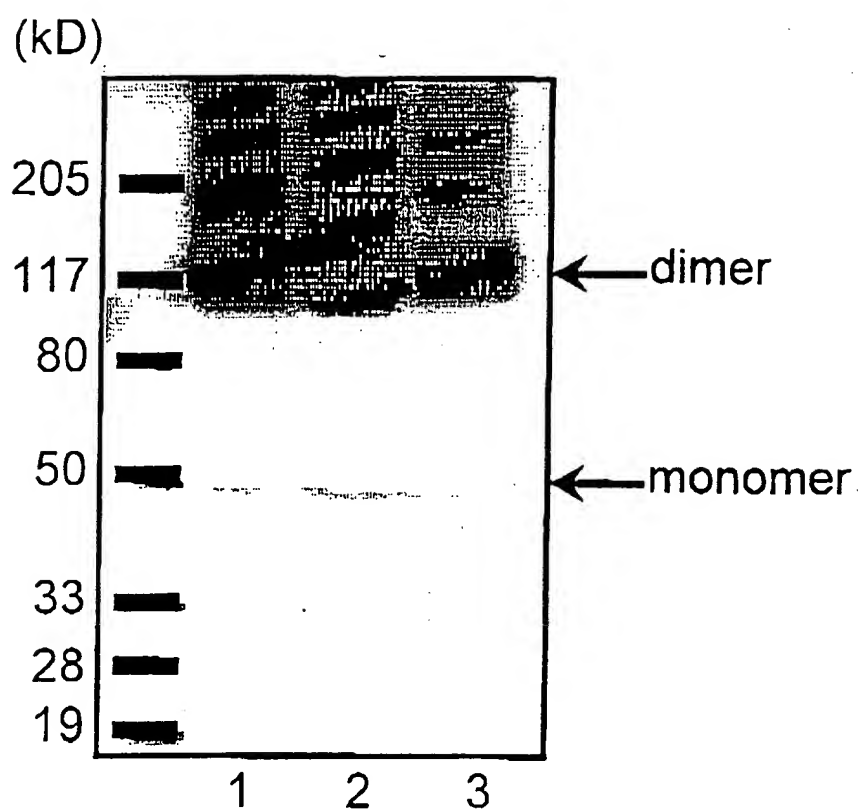


Figure 9



Lane 1: CHO C' FLAG human NR6 clone #30
 Lane 2: CHO N' FLAG human NR6 clone #23
 Lane 3: 293T C' FLAG human NR6 clone #38

Biosensor response

1577 Units
 2141 Units
 Not Determined